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Repeat Pass Synthetic Aperture Radar Interferometry for Environmental Monitoring

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Abstract:

Interferometric SAR (InSAR) is increasingly applied to global monitoring and observation problems, including volcanic and seismic hazard monitoring, wide area mapping of topography, and urban planning and other civil applications. In addition to its increasingly important cartographic and geodetic utility, InSAR also provides a sensitive measurement of surface changes at sensitive scales. Wind-blown sand and dust, changes in vegetation cover and content, and the meanderings of rivers and other water bodies can be monitored for changes easily. This talk will present some of the recent applications of InSAR to surface changes that are relevant to environmental monitoring, including, sand movements, vegetation and biomass characterization and monitoring, and flood plain mapping.

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Principal Author Biography:

Paul Rosen is presently supervisor of the Interferometric Synthetic Aperture Radar Algorithms and System Analysis Group at Jet Propulsion Laboratory. Dr. Rosen's research at JPL has been primarily in development of scientific applications and engineering methods of interferometric SAR. He has developed interferometric SAR processors for airborne topographic mapping systems, as well as spaceborne topographic and deformation processors for sensors such as ERS, JERS, RadarSAT, and recently SRTM. Dr. Rosen has developed and promoted scientific applications of differential interferometry, including crustal deformation mapping, and hazard and environmental assessment.

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Needs to go through
Doc review,
probably.